

REMARKS

Claims 22, 26, 27, 29, 30, 32, 33, 35, and 42 were previously pending in the application. This Amendment amends claims 22, 27, 29, 35, and 42, cancels claim 26, and adds new claim 43. Claims 30, 32, and 33 remain unchanged. Claims 22 and 29 are independent.

Entry of this Amendment is proper because it does not raise any new issues requiring further search by the Examiner, narrows the issues on appeal, and is believed to place the present application in condition for immediate allowance.

The Claimed Invention

An exemplary embodiment of the claimed invention, as recited by, for example, independent claim 22, is directed to a method for controlling heating processes in a coffee machine, which is suitable for preparing coffee on the basis of coffee pads, wherein the coffee machine comprises a continuous flow heater having an adjustable heating power and a pump for conveying water through the continuous flow heater, the method comprising measuring a first temperature between the continuous flow heater and a brewing chamber; measuring a second temperature between the pump and the continuous flow heater; and influencing an amount of water conveyed by the pump in response to the first and second temperatures by performing a pulsed operation of the pump.

An exemplary embodiment of the claimed invention, as recited by, for example, independent claim 29, is directed to an electronic control device for controlling a heating process in a coffee machine for preparing coffee using coffee pads, the coffee machine comprising a continuous flow heater having an adjustable heating power and a pump for conveying water along a conveying section through the continuous flow heater and a plurality of temperature sensor sensors, a first temperature sensor disposed between the continuous flow heater and a brewing chamber, and a second temperature sensor disposed between the pump and the continuous flow heater, wherein the electronic control device comprises means for influencing an amount of water conveyed by the

pump in response to temperatures measured by the first and second temperature sensors by performing a pulsed operation of the pump.

By supplying the amount of water conveyed by the pump in a metered manner depending on the temperature, any uncontrolled evolution of steam, particularly as a result of local temperature differences, and the high dependence of the coffee outlet temperature on ambient conditions can be eliminated. See, e.g., page 3, lines 1-7.

The Rejection under 35 U.S.C. § 102

Claims 22, 26-27, 29, 30, 35 and 42 are rejected under 35 U.S.C. § 102(b) as being anticipated by the Liverani reference (U.S. Patent No. 5,738,001).

Applicants respectfully traverse this rejection.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. [...] The identical invention must be shown in as complete detail as is contained in the ... claim." M.P.E.P. § 2131.

Claim 22 recites "influencing an amount of water conveyed by the pump in response to the first and second temperatures by performing a pulsed operation of the pump."

Claim 29 recites "means for influencing an amount of water conveyed by the pump in response to temperatures measured by the first and second temperature sensors by performing a pulsed operation of the pump." See, e.g., paragraphs [015], [034], [035], and [057].

Contrary to the assertions in the Office Action, the Liverani reference does not provide any teaching of a pulsed operation of the pump 6. Instead, the Liverani reference simply teaches that the pump 6 is turned on and continuously operated until a certain amount of water (i.e., until the desired volume of standard coffee drink or diluted coffee drink) is pumped through the heat exchanger 7 based on the signal from the delivery counter means 12. See, e.g., col. 4, lines 10-23 and 32-34; and col. 5, lines 46-47.

The Liverani reference does not disclose or suggest “influencing an amount of water conveyed by the pump in response to the first and second temperatures by performing a pulsed operation of the pump” as recited in claim 22.

The Liverani reference does not disclose or suggest “means for influencing an amount of water conveyed by the pump in response to temperatures measured by the first and second temperature sensors by performing a pulsed operation of the pump” as recited in claim 29.

Claims 27, 29, 30, 35, and 42 are patentable over the applied reference by virtue of their dependency from claims 22 and 29, respectively, as well as for the additional features recited therein.

Applicants respectfully request withdrawal of this rejection.

The Rejections under 35 U.S.C. § 103

Claims 32 and 33 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the Liverani reference in view of the Harrison reference (U.S. Patent No. 5,417,152). Claim 35 is rejected under 35 U.S.C. § 103(a) as being unpatentable over the Liverani reference.

Applicants respectfully traverse these rejections.

Claim 32 recites wherein the means for influencing the amount of water conveyed includes a restrictor. Claim 33 recites wherein the restrictor includes a slider disposed in the conveying section. Claim 35 recites wherein the continuous flow heater includes a plurality of heaters and the means for influencing the heating power comprises a controller for switching on different numbers of the plurality of heaters.

Claims 32, 33, and 35 are patentable over the applied reference by virtue of their dependency from claim 29, as well as for the additional features recited therein.

Contrary to the assertions in the Office Action, one of ordinary skill in the art would not have any apparent reason to combine the teachings of the Liverani reference in view of the Harrison reference to arrive at claims 32 and 33.

The Harrison reference is concerned with speed control in a juice extractor. The Harrison reference has no relation to the purpose of the Liverani reference, which is to maintain the reference temperature of the water exiting the heat exchanger. See, e.g., Abstract. The Liverani reference does not disclose or mentioned speed control. Thus, one of ordinary skill in the art would not have any apparent reason to combine the teachings of the Liverani reference in view of the Harrison reference to arrive at claims 32 and 33.

Applicants respectfully submit that the features of claims 32 and 33 are not an obvious variation of the teachings of the Liverani reference and the Harrison reference, and would not be obvious to try based on the teachings of these references and without the benefit of the teachings of the present invention.

Applicants respectfully request withdrawal of these rejections.

New Claim

This Amendment adds new claim 43 to recite the features of influencing the adjustable heating power in response to the first and second temperatures, as previously defined by claim 22. This Amendment does not add new matter. Claim 43 is patentable over the applied references by virtue of its dependency from claim 22, as well as for the additional features recited therein.

Applicants respectfully request allowance of the claims.

CONCLUSION

In view of the above, entry of the present Amendment and allowance of Claims 22, 27, 29, 30, 32, 33, 35, 42, and 43 are respectfully requested. If the Examiner has any questions regarding this amendment, the Examiner is requested to contact the undersigned. If an extension of time for this paper is required, petition for extension is herewith made.

Respectfully submitted,

/Andre Pallapies/

Andre Pallapies

Registration No. 62,246

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BSH Home Appliances Corporation
100 Bosch Boulevard
New Bern, NC 28562
Phone: 252-672-7927
Fax: 714-845-2807
andre.pallapies@bshg.com